TRANSCAT
Visit us at Transcat.com!
35 Vantage Point Drive // Rochester, NY 14624 // Call 1.800.800.5001

Specification Sheet
SS-CP-2180-US Issue 0210

JOFRA™ CPC Series

Compact Pressure Calibrator

Portable, traceable, field instrument designed for easy and reliable check and calibration of pressure. Use the CPC series in process control applications such as verification or calibration of pressure gauges, transducers, transmitters, pressure switches and safety valves.

Pressure range

CPC010	10 psi / 0.7 bar
CPC030	30 psi / 2 bar
CPC200	200 psi / 15 bar

Ideal for on-site use

Complete ready-to-use calibration systems in one carrying case or as individual indicators.

One hand operation

No need for a flat surface to operate the system. Operates as good on a ladder as in your maintenance shop.

High flexibility

The calibration system can easily be disassembled so the indicator can be used separately for pressure monitoring tasks.

Save time - instant general view

The display shows both reference pressure and the transmitter loop current from the device-under-test at the same time.

Transmitter loop

Measure the transmitter loop current up to 24 mA (125%) and the pressure at the same time.

Easy pressure switch test

Automatically records opening and closing point values on the display.

Record min. and maximum readings

Use the CPC indicator to capture the minimum and maximum pressure readings in safety valve applications.

Easy recalibration of the unit

No need to send it back to the manufacturer. Re-calibrate and adjust at your local calibration laboratorium.

ISO 9001
Manufacturer

PRODUCT DESCRIPTION

The JOFRA CPC calibrator series is the new generation of the successful AMETEK series of pressure calibrators. The CPC series is recognized by its high quality and carefully selected features that save time and make calibration tasks easy to perform; e.g. dual information display, 11 different pressure units, transmitter mA reading, min/max recording, peak reading, and semi-automatic pressure switch test finding the closing, opening and the hysteresis pressure (dead band).

Maintenance of the instrument is made easy. Re-calibration of the unit can be performed locally with an accurate pressure reference: No need to send the unit back to the manufacturer for re-calibration. For all systems the pump and the indicator are seperate so replacement of the pump does not mean that you have to send the complete system for repair.

JOFRA CPC can be delivered as an individual indicator or as a complete calibration system ready for use in a carrying case, including pump, hose, connectors, battery, test leads, user manual,
and traceable calibration certificate.

AMETEK®
CALIBRATION INSTRUMENTS

JOFRA CPC SYSTEM A

- **10 psi / 0.7 bar**
- **30 psi / 2 bar**
- **200 psi / 15 bar**

This system includes the JOFRA CPC calibrator together with one of the following pneumatic hand pumps: T-730 or T-740, depending on the chosen pressure range.
System A is an easy-to-use singlehand operated calibration system. No need for a flat surface to operate the system - just hold it in your hand.

The System A comes in an aluminum carrying case with cutouts for fittings, hose, and the complete assembled calibration unit - no time is required to assemble the unit every time you need it. The calibrator (indicator) can at any time be used separately for other pressure test tasks.

A special quick connector between the pump and the indicator makes it possible to seperate the system in seconds.

The JOFRA CPC delivery always includes a protective softcase for the indicator. All CPC indicators are delivered calibrated in both pressure and vacuum. If a vacuum pump is required see the accessory list.

T-700 series hand pumps

This hand pump is used in the CPC System A. 3 pump models are available, each covering a specific pressure range.

The pump features a built-in relief valve, a vernier valve for fine adjustment, and dual pressure output. There is an easy connection between the pump and the calibrator.

Range, T-730:..... 0 to 2 bar / 0 to 30 psi
Range, T-740:..... 0 to 15 bar / 0 to 200 psi
Range, T-750:.....-0.850 to 0 bar / -25 to 0 inHg
Test medium: ..... Air
Wetted parts.....Aluminum, brass, stainless
.....steel, nylon, Nylatron GS
Connections to test object: ..... 0.6 m / 24 in. hose +
.....1/4" female BSP and NPT.

Standard delivery:

CPC calibrator (indicator):

- Traceable calibration certificate (NIST)
- With pressure and vacuum performance
- 9V Battery
- converter to 1/4" NPT female
- converter to 1/4" BSP female
- Test leads; red and black
- Soft case and shoulder strap
- User manual

Also included with system A delivery:

- Hand pump T-730 for CPC010 (10 psi)
- Hand pump T-730 for CPC030 (30 psi)
- Hand pump T-740 for CPC200 (200 psi)
- Hose 0.6 m / 24 in. with 1/4" BSP and NPT female connector
- Quick connector between pump and indicator
- 1 roll of teflon tape
- Aluminum carrying case
- Fitting to go from the quick connector on indicator to 1/4" BSP or NPT female

Accessories

Part No.	Description
Recommended fitting set for the system - to interface your device-under-test with the test hose:	
65R191	Fitting set BSP female: 1x1/8" 1x3/8" 1x1/2" teflon tape and packings (60R191)
65R192	Fitting set NPT female: 1x1/8" 1x1/4" 1x3/8" 1x1/2" teflon tape and packings (60R191)
60R191	Set of rubber packings for 65R191 and 65R192
60I104	Role of teflon tape
60R178	Fitting: From the quick connector to 1/4" BSP fem.
60R166	Fitting: From the quick connector to 1/4" NPT fem.
SPK-HPC-002	System quick connector including T-876
T-876	Replacement swivel fitting for the pumps
124109	Aluminum carrying case for CPC system A
SPK-HHC-002	Soft carrying case for the CPC indicator
104203	Test leads; 1 x black and 1 x red
SPK-CPC-001	User manual for the CPC series
T-730	Pump: 0 to 2 bar / 0 to 30 psi
T-740	Pump: 0 to 15 bar / 0 to 200 psi
T-750	Pump: -0.850 to 0 bar / -25 to 0 inHg

Ordering information system A

Order No.	Description
	Pressure calibrator - 1st thru 3th char.
CPC	CPC pressure calibrator
	Indicator pressure range - 4th thru 7th char.
010C	Vacuum to 10 psi / 0.7 barg
030C	Vacuum to 30 psi / 2 barg
200C	Vacuum to 200 psi / 15 barg
	Base model number - 8th thru 10th char.
AXX	CPC calibration system A
IND	CPC indicator only
	Certificate - 11th char.
G	NIST traceable certificate (standard)
H	Accredited certificate
CPC030CAXXG	**Sample order number**

JOFRA CPC 30 psi / 2 bar pressure calibration system A. T-730 hand pump and NIST traceable calibration certificate.

JOFRA CPC SYSTEM B

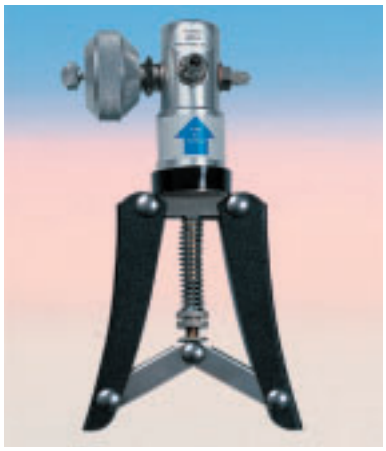
- **-30 inHg to 200 psi**
  -1 to 15 bar

This system includes the dual function pneumatic hand pump. With this pump you can calibrate both vacuum and pressure applications. It takes just a few seconds to switch between vacuum and pressure, just push one button (valve) on the T-910 handpump.

The system B comes in a carrying case with cutouts for fittings, hose and the complete assembled calibration unit - no time required to assemble the unit every time.

The indicator and the pump are fitted with a special quick connector that makes it possible to seperate the system in seconds without any tool. This quick connector also makes it possible to use the assembled system with the indicator twisted to any angle.

T-910 hand pump



The T-910 pump is an easy-to-use single hand operated pneumatic pump.

The T-910 pump features both vacuum and pressure generation up to 40 bar / 580 psi. One button (valve) makes it easy to switch from vacuum to pressure measurements.

Built-in release valve, vernier valve for fine adjustment and dual pressure output enable safe and simple operation.

Pressure range.....-0.960 to 40 bar / -29 inHg to 580 psi
Test medium ..... Air
Wetted parts ..... Anodized aluminum, nickel-plated brass, ...stainless steel, Nylon
Connections to test object: ..... Hose 1 m / 40 in. + ... 1/4" BSP and NPT female

Standard delivery:

CPC calibrator (indicator):

- Traceable calibration certificate (NIST)
- With pressure and vacuum performance
- 9 V Battery
- converter to 1/4 in. NPT female
- converter to 1/4 in. BSP female
- Test leads; red and black
- Soft carrying case
- User manual

Also included with system B delivery:

- Hand pump T-910
- Hose 1 m / 40 in. with 1/4" BSP and NPT female connector
- Quick connector between pump and indicator
- 1 roll of teflon tape
- Alluminum carrying case
- Fitting to go from the quick connector on the indicator to 1/4 in. BSP or NPT female (when using the indicator as a gauge in the process)

Accessories

Part No.	Description
Recommended fitting set 65R191 or 192 for the system - to interface your device-under-test with the test hose:	
65R191	Fitting set BSP female: 1x1/8" 1x3/8" 1x1/2" teflon tape and packings (60R191)
65R192	Fitting set NPT female: 1x1/8" 1x1/4" 1x3/8" 1x1/2" teflon tape and packings (60R191)
60R191	Set of rubber packings for 65R191 and 65R192
60I104	Role of teflon tape
60R178	Fitting: From the quick connector to 1/4" BSP fem.
60R166	Fitting: From the quick connector to 1/4" NPT fem.
SPK-HPC-001	System quick connector (system B)
124110	Aluminum carrying case for CPC system B
SPK-HHC-002	Soft carrying case for the CPC indicator
104203	Test leads; 1 x black and 1 x red
SPK-CPC-001	User manual for the CPC series
T-910	Pump: -0.960 to 40 bar / -29 inHg to 580 psi

Ordering information CPC system B

Order No.	Description
	Pressure calibrator - 1st thru 3th char.
CPC	CPC pressure calibrator
	Indicator pressure range - 4th thru 7th char.
200C	Vacuum to 200 psi / 15 bar
	System - 8th thru 10th char.
BXX	CPC calibration system B
IND	CPC indicator only
	Certificate - 11th char.
G	NIST traceable certificate (standard)
H	Accredited certificate
CPC200CBXXG	**Sample order number**

JOFRA CPC 200 psi pressure calibration system B and NIST traceable calibration certificate.

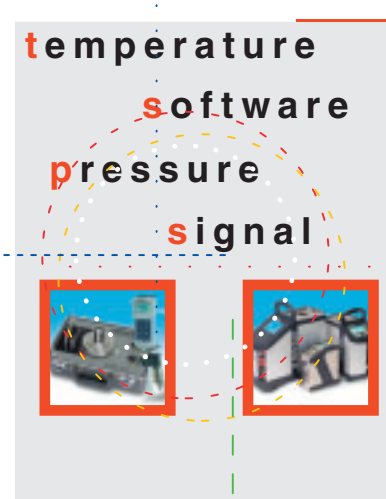
JOFRA CPC INDICATOR SPECIFICATIONS

Resolution	CPC010 Vacuum to 10 psi Vacuum to 0.7 bar		CPC030 Vacuum to 30 psi Vacuum to 2 bar		CPC200 Vacuum to 200 psi Vacuum to 15 bar	
psi	-12.589	10.000	-12.589	30.000	-12.59	200.00
bar	-0.8680	0.7000	-0.8680	2.0000	-0.868	15.000
mbar	-868.00	700.00	-868.0	2000.0	-868	15000
KPa	-86.800	70.000	-86.80	200.00	-86.8	1500.0
Kg/cm^2	-885.12	0.7138	-885.12	2.0394	-885.12	15.296
cmH_2O@4°C	-885.14	713.82	-885.14	2039.5	-885	15296
cmH_2O@20°C	-886.71	715.09	-886.71	2043.1	-886	15324
mH_2O@4°C	-8.8510	7.1379	-8.8510	20.394	-8.85	152.96
mH_2O@20°C	-8.8666	7.1505	-8.8666	20.430	-8.87	153.23
inH_2O@4°C	-348.48	281.03	-348.48	802.95	-348.4	6022.1
inH_2O@20°C	-349.10	281.53	-349.10	804.37	-349.1	6032.8
inH_2O@60°F	-348.82	281.31	-348.82	803.73	-348.8	6028.0
mmHg@0°C	-651.06	525.04	-651.06	1500.1	-651	11251
inHg@0°C	-25.632	20.671	-25.632	59.060	-25.63	442.95
ftH_2O@4°C	-29.040	23.419	-29.040	66.912	-29.04	501.84
ftH_2O@20°C	-29.091	23.461	-29.091	67.030	-29.09	502.73
ftH_2O@60°F	-29.064	23.439	-29.064	66.968	-29.06	502.26

Accuracy positive pressure	±0.05% of F.S.*[1]
Accuracy vacuum	±0.1% F.S.*[1]
Temperature compensation	±0.005% F.S. /°C outside 18 to 28°C ±0.003% F.S. /°F outside 64 to 82°F
Overload maximum pressure	+50% Full Scale
Overload "OL" in display activates at:	+20% Full Scale
Media compatibility	Non-corrosive gasses and liquids
Connection	1/8 in. NPT female - see delivery section for adapters
Display	Dual information LCD plus icon indicators
Display update	Twice per second
Min/Max Peak hold capture	50 milliseconds
mA input	0 to 24 mA accuracy: ±0.015% of reading +2 µA
Switch test	Supply max. 9 V
Power supply / Batteries	1x 9 V Alkaline (minimum 15 hours operation)
Low battery indicator	at 7 V
Dimensions L x W x H:	200 x 82 x 54 mm / 7.9 x 3.2 x 2.1 in.
Net weight	470 g / 17 oz
Conforming to CE regulations EMC:	EN50082-1, 1992 and EN55022, 1994 Class B
Safety	CSA C22.2 No. 1010.1, 1992

*[1] F.S. Full Scale is the numerical value of the postive pressure range. The accuracy includes non-linearity, hysteresis, repeatability and temperature effect 18 to 28°C / 64 to 82°F.

All above specifications are specified at 23°±3°C / 73°±6°F unless otherwise noticed.



AMETEK
Calibration Instruments
offers a complete range of calibration equipment for pressure, temperature, and signal - including software.

Temperature standards
Portable precision thermometer. Dry-block calibrators: 4 series, more than 20 models - featuring speed, portability, accuracy, and advanced documenting functions.

Primary pressure standards
Pneumatic floating-ball or hydraulic piston deadweight testers - easy- to-use with accuracies up to 0.015% of reading.

Electronic pressure standards
Convenient electronic systems ranging from -1 to 700 bar / 25 inHg to 10,000 psi - multiple choices of pressure ranges, pumps, and accuracies, fully temperature-compensated for problem-free and accurate field use.

Signal calibration
Process signal measurement and simulation for easy control loop calibration and measurement tasks - from handheld field instruments for multi or single signals to laboratory reference level bench top instruments.

...because calibration is a matter of confidence

AMETEK®
CALIBRATION INSTRUMENTS

AMETEK is a leading global manufacturer of electrical and electromechanical products for niche markets. AMETEK's annual sales exceed $1billion. NYSE (AME) since 1930. Operations are in US, Europe and Asia, with about 1/3 of sales to markets outside the US.

Distributor:

TRANSCAT
Visit us at Transcat.com!
35 Vantage Point Drive // Rochester, NY 14624 // Call 1.800.800.5001

Information within this document is subject to change without notice.

Copyright 2002 by AMETEK, Inc. AMETEK is a registered trademark of AMETEK, Inc.